Abstract

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Title: Capture of the abduction contracture of the hip joint as a biomechanical cause of idiopathic scoliosis

The theme of the thesis is based on lectures and numerous publications by Professor Tomasz Karski, MD, PhD from Lublin, published in international journals (from the 1990s to the present). The work is based on the biomechanical cause of the "so-called idiopathic" scoliosis, the cause of which is considered primarily the restriction of adduction in the right hip joint – an abduction contracture. This contracture is one of the symptoms of "contractures and deformity syndrome" according to Prof. Hans Mau (Tübingen, Germany). The years-long prevailing "standing easy" attitude on the right lower limb is a manifestation of the restriction of abduction – the abduction contracture in the right hip joint and the cause of scoliosis in two groups and three types of classification of "biomechanical" scoliosis according to Karski.

The main object of the thesis is an objective assessment of the relationship between the abduction contracture of the right hip joint and the idiopathic scoliosis of the spine in the examined set of probands.

The thesis focuses, among other things, on the recent overview of the knowledge about idiopathic scoliosis, especially on diagnostics and conservative treatment, where preventive and therapeutic physiotherapeutic procedures are an irreplaceable part. The work provides plausibly scientifically based opinions on etiopathogenesis of the IS, which are based on experimental works (published in the 1960s – 90th years of the 20th century) of Associate Professor Milan Roth, MD, DSc. (Brno), on which Professor Mikhail Dudin DSc. (St. Petersburg, Russia) very successfully followed in the late nineties of the 20th century.

The presence of an abduction contracture of the right hip joint in patients with idiopathic scoliosis, which we evaluated almost in the same way with Professor Karski by Ober's test, has not been fully confirmed. In our small set of IS patients there were individuals who do not have an abduction contracture, and therefore a reflection on a different etiology is offered.

The statistically significant correlation with IS was at unilaterally positive Trendelenburg-Duchenne examination, which we consider to be a more important risk factor for the emergence of the IS than a positive Ober test.

The results of the study could be used as a basis for further research, aimed at standardizing of the examination, which will allow early capture of the onset of the biomechanical scoliosis.

Keywords: idiopathic scoliosis, contracture, seven contracture syndrome, defective posture, clinical-anthropological examination, Ober test, Trendelenburg-Duchenne examination.